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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,720	05/29/2001	Olivier Vendier	Q64636	5944

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EXAMINER

KIANNI, KAVEH C

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/865,720

Applicant(s)

VENDIER ET AL.

Examiner

Kevin C Kianni

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 9-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in Application No. \_\_\_\_.
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2 and 11 are objected to because of the following informalities: The claims should be devoid of the phrase "preferably", that is inconsistent with proper/allowed claim limitations. Appropriate correction is required.

### ***Allowable Subject Matter***

2. Claims 9-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 9-12 are allowable because the prior art in combination with other limitations of the base claim does not teach, wherein the heat removal means comprise a first segment and a second segment, the first segment connecting the specialist integrated circuit to a first face of the module, this first face being distinct from a second face making contact between the module and the heatsink-plate, and the second segment connecting said second face to the heatsink-plate.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesselbom (US 6014313).

Regarding claim 1-4, Hesselbom teaches an electronic assembly (shown at least in fig. 1-2) comprising at least a first integrated electronic module 3, the first module including at least one interconnection means for optical connection to a printed circuit card or to a second electronic module(see fig. 2, items electronic chips/modules interconnections and col. 11, lines 20-35), the assembly including a heatsink-plate 19 and heat removal means (liquid) for removing heat from said module to the heatsink-plate (see col. 10, lines 35-59; wherein the heat exchange between the electrical modules and coolant 19 takes place through liquid channels/pipes, see col. 11, lines 6-19), and wherein the heatsink-plate is independent of the interconnection means of the first module (see col. 10, lines 43-59); Hesselbom further teaches wherein the interconnection means includes an optical fiber (col. 11, lines 31-35); wherein the optical fiber is included in a printed circuit card, and wherein a first end of the fiber is mounted in register with an optical contact of the first module by means of balls bonded to the module and disposed with precision relative to metal areas of the printed circuit card (see fig. 2-3, items connecting balls, see col. 7, lines 30-35).

However, Hesselbom does not specifically teach wherein the above heatsink-plate is a soleplate, the interconnection means includes a flexible printed circuit, and the end of the optical fiber preferably includes an etched lens. It is obvious to a person of ordinary skill in the art when the invention was made to modify

Hesselbom's optoelectronic elements with well known analogously functional elements (such as references such as GB 2322203, provided by applicant, and US 4729296, US 4836637 and US 5428190 provided herein as prior art ) in order to assemble n entire plane of the 3-dimensional multichip module easily and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St Regis Paper Co. v. Bemis Co., 193 USPQ 8. and since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding claim 5, Hesselbom further teaches the interconnection means includes a printed circuit card portion connected to the first module and a second printed circuit card portion connected to the second module, the two cards being interconnected by a second interconnection means (see col. 11, lines 20-34).

Regarding claim 6, Hesselbom further teaches wherein the two cards are secured to each other and the second interconnection means is constituted by tracks interconnecting the two card portions (shown in at least fig. 4).

Regarding claim 7, the arguments presented in rejection of claim of claim 1 is analogous in rejection of claim 7.

Regarding claim 8, Hesselbom further teaches wherein the interconnection means comprise a contact matrix, the contact matrix being mounted, for example, between the module and the printed circuit card (shown in at least fig. 4, items matrix interconnections).

***Citation of Relevant Prior Art***

5. Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Fitzsimmons et al. 5276455

6349553

Kordes et al. 6430052

Jacobowitz et al. 5333225

Eden 5300810

Jayaraj et al. 6320257

Sabin 4729296 teaches soleplate

Poorman et al. 4836637 teaches lens etched at the end of fiber

Stopperan 5428190 teaches flexible circuit board

These references are cited herein to show the relevance of the apparatus/methods taught within this reference as prior art.

**Contact Information**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaveh Cyrus Kianni whose telephone number is (703) 308-1216.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (703) 308-4881.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 308-7722, (for formal communications intended for entry)


**or:**

(703) 308-7721, (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South  
Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.

Kevin Cyrus Kianni  
Patent Examiner  
Group Art Unit 2877

  
Frank Font  
Supervisory Patent Examiner  
Group Art Unit 2877

February 19, 2003